CLAIMS

We claim:

- 1. An isolated polypeptide comprising fifteen contiguous amino acid residues of a polypeptide as shown in SEQ ID NO:M, wherein M is an even integer from 2 to 328.
- 2. The isolated polypeptide of claim 1 which is from 15 to 723 amino acid residues in length.
- 3. The isolated polypeptide of claim 2, wherein said at least fifteen contiguous amino acid residues of SEQ ID NO:M are operably linked via a peptide bond or polypeptide linker to a second polypeptide selected from the group consisting of maltose binding protein, an immunoglobulin constant region, a polyhistidine tag, and a peptide as shown in SEQ ID NO:329.
- 4. The isolated polypeptide of claim 1 comprising at least 30 contiguous residues of SEQ ID NO:M.
- 5. The isolated polypeptide of claim 1 comprising at least 47 contiguous residues of SEQ ID NO:M.
- 6. An isolated, mature protein encoded by a sequence selected from the group consisting of SEQ ID NO:N, wherein N is an odd integer from 1 to 327.
- 7. An isolated polynucleotide comprising a sequence of nucleotides as shown in SEQ ID NO:N, wherein N is an odd integer from 1 to 327.
- 8. An expression vector comprising the following operably linked elements:
 - a transcription promoter;
- a DNA segment encoding a polypeptide as shown in SEQ ID NO:M, wherein M is an even integer from 2 to 328; and
 - a transcription terminator.
 - 9. A cultured cell comprising the expression vector of claim 8.

- 10. A method of producing a polypeptide comprising culturing the cell of claim 9 under conditions whereby said sequence of nucleotides is expressed, and recovering said polypeptide.
 - 11. A polypeptide produced by the method of claim 10.
- 12. An isolated polynucleotide encoding a fusion protein, said protein comprising a secretory peptide selected from the group consisting of secretory peptides shown in Table 1, operably linked to a second polypeptide.
- 13. An expression vector comprising the following operably linked elements:
 - a transcription promoter;
- a DNA segment encoding a fusion protein, said protein comprising a secretory peptide selected from the group consisting of secretory peptides shown in Table 1, wherein M is an even integer from 2 to 328, operably linked to a second polypeptide; and
 - a transcription terminator.
- 14. A cultured cell comprising the expression vector of claim 13, wherein the cell expresses the DNA segment and produces the encoded fusion protein.
- 15. A method of producing a protein comprising culturing the cell of claim 14 under conditions whereby said DNA segment is expressed, and recovering said second polypeptide.
- 16. A computer-readable medium encoded with a data structure comprising SEQ ID NO:X, wherein X is an integer from 1 to 328.
- 17. An antibody that specifically binds to a protein selected from of the group consisting of SEQ ID NO:M, wherein M is an even integer from 2 to 328.
- 18. An isolated polypeptide comprising fourteen contiguous amino acid residues of a polypeptide as shown in SEQ ID NO:M, wherein M is an even integer from 2 to 328.

19. A method of detecting protein secretion from a cell or tissue comprising detecting a mature MSP selected from the group consisting of SEQ ID NO:M, wherein M is an even integer from 2 to 328 in conditioned media or membrane extracts.